

**AN
INTERNSHIP REPORT
ON
AUTOMATIC PRONUNCIATION MISTAKE DETECTOR
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Automatic Pronunciation Mistake Detector

1) Background/ Problem Statement

Given the drawbacks of traditional English pronunciation correction systems, such as failure to provide timely feedback and correct learners' pronunciation errors, slow improvement of learners' English proficiency, and even misleading learners, it is critical to developing a scientific and efficient automatic correction system for English pronunciation errors.

Our Automatic Pronunciation Mistake Detection project is an efficient automatic correction system for English pronunciation errors. It is designed to enable students/user to improve their pronunciation skills. By using Speech recognition, pyaudio and pyttsx3, the project aims to efficiently diminish the error rate and enhance the accuracy of error detection.

2) Working of the Project

This python-based project consists of 2 major modules, including User and Admin. The user would require to register first by filling in their name, age, gender, standard and username & password of their choice. The user would then need to log in to use the site.

For pronunciation detection, the user would need to select the word they want to pronounce and record it. The pronunciation mistake will be recognized by comparing the word entered and the conversion of the recorded word to text. If it doesn't match it will give a pop-up as wrong pronunciation. The user can view the words pronounced and can hear the correct pronunciation of the word they had pronounced wrong, by clicking on the audio file. The admin has the access to view the users' details and their pronunciation mistakes. They can also add, update, delete and view words.

In this project, Html, CSS and JavaScript are used in the front end and Python is used in the back end. The database used is MySQL and Django is used for the framework.

3) Advantages

- It is user-friendly.
- The system is easy to maintain.
- It is designed to assist learners in detecting and correcting errors in spoken English pronunciation.
- It can detect pronunciation mistakes accurately.

4) System Description

The system comprises 2 major modules with their sub-modules as follows:

❖ User:

• Registration:

- The user can register by filling in their name, age, gender, username, password and standard.

• Login:

- The user can log in using the username and password they used during registration.

• Detection:

- The user can select the word they want to pronounce.
- The user would need to record the particular word.
- The system will detect pronunciation mistakes by comparing the word entered and the conversion of the recorded word to text.
- If it doesn't match, it will give a pop-up as a wrong pronunciation.

• View Pronunciation History:

- The user can view the words pronounced and can hear the correct pronunciation of the word they had pronounced wrong by clicking on the audio file.

❖ **Admin:**

- **Login:**

- The admin can log into the system using a username and password.

- **View Users:**

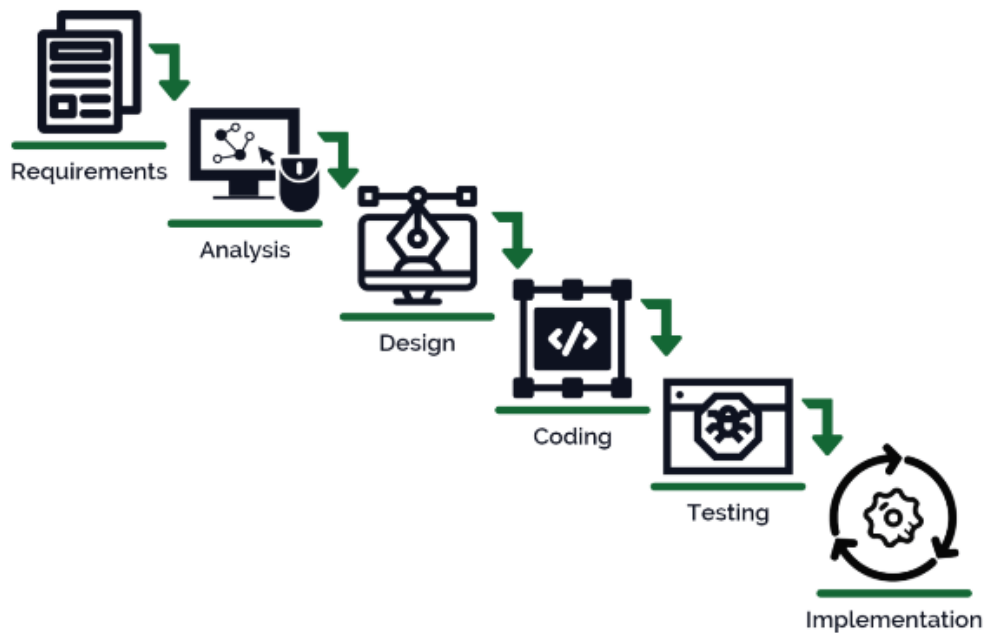
- The admin can view the user details.
 - They can also view the user's pronunciation mistakes.

- **Manage Words:**

- The admin has the access to add, edit, delete and view words.

5) Project Life Cycle

The waterfall model is a classical model used in the system development life cycle to create a system with a linear and sequential approach. It is termed a waterfall because the model develops systematically from one phase to another in a downward fashion. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirements. The waterfall approach is the earliest approach that was used for software development.



6) System Requirements

I. Hardware Requirement

i.Laptop or PC

- Windows 7 or higher
- I3 processor system or higher
- 4 GB RAM or higher
- 100 GB ROM or higher

II. Software Requirement

ii.Laptop or PC

- Python
- Sublime Text Editor
- XAMP Server

7) *Limitations/Disadvantages*

- If the correctly pronounced word is not recorded properly, it can detect unnecessary mistakes.
- Sometimes show inaccurate results.

8) Application –

- Our Automatic Pronunciation Mistake Detection project is an efficient automatic correction system for English pronunciation errors for new language learners.

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